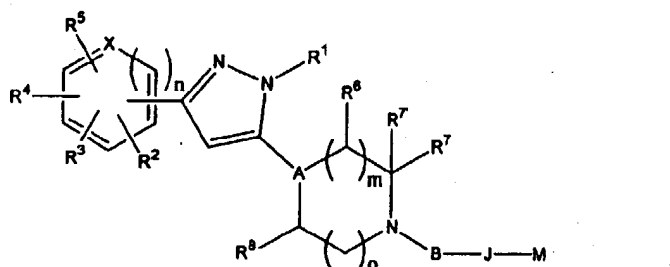


Art Unit: 1624

Appendix

Claims 1-20 (canceled).

Claim 21 (Currently Amended): A compound of formula I



where:

m is an integer selected from 0, 1, and 2;

n and o are integers independently selected from 0 and 1;

A is selected from the group consisting of N and CH;

B is selected from the group consisting of -CH₂-CH₂-, -CH₂-CH₂-CH₂-, -CH₂-CH₂-NH-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -C(=O)-NH-, -C(=O)-CH₂-, -CH₂-C(=O)-NH-, -C(=O)-CH₂-C(=O)-, -C(=O)-NH-CH₂-, -C(=O)-, -S(=O)-, -S(=O)₂-, -S(=O)-NH-, -S(=O)₂-NH-, -S(=O)-CH₂-, -S(=O)₂-CH₂-, -S(=O)-CH₂-NH-, -S(=O)₂-CH₂-NH-, -S(=O)₂-NH-CH₂-, -CH₂-S(=O)₂-NH-, -C(=O)-NH-S(=O)₂-, -S(=O)₂-NH-C(=O)-, -C(=O)-CH₂-S(=O)₂-, and -S(=O)₂-CH₂-C(=O)-;

J is absent or selected from the group consisting of -O-, -S-, -CHR¹⁵-O-, -CH₂-CHR¹⁵-O-, -NH-, -NH-CHR¹⁵-, -NH-CHR¹⁵-C(=O)-, -C(=O)-, -CH₂-, -CHR¹⁵-CH₂-NH-, -C(=O)-CHR¹⁵-, -NH-C(=O)-CH(C₁-C₆alkyl)-, -NH-C(=O)-CH(C₃-C₁₂cycloalkyl)-, -CH₂CH₂-, -CH₂NH-, -CH₂NH-C(=O)-, -CH₂NH-C(=O)-C₁-C₆alkyl-, -CH₂NH-C(=O)-CH(C₃-C₁₂cycloalkyl)- and -C(=O)-CHR¹⁵-NH-; or

B-J is selected from the group consisting of -C(=O)-CH₂-NH-C(=O)-CH(C₁-C₆alkyl)-, -C(=O)-CH₂-NH-C(=O)-CH(C₃-C₁₂cycloalkyl)-, -C(=O)-NH-(C₂-C₆alkyl)-, -S(=O)₂-NH-(C₂-C₆alkyl)-, -C(=O)-[(-O-)]-NH-, -S(=O)₂-NH-, -C(=O)-CH₂-[(-CH-)] and -S(=O)₂[(-O-)]-CH₂;

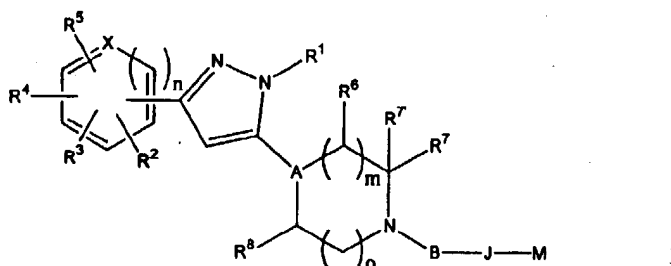
L is selected from the group consisting of -O-, -CH₂-O-, -O-CH₂-, -CH₂-CH₂-O-, -O-CH₂-CH₂-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -C(=O)-NH-, -O-C(=O)-NH-, -CH₂-C(=O)-NH-, -C(=O)-CH₂-

Art Unit: 1624

Appendix

Claims 1-20 (canceled).

Claim 21 (Currently Amended): A compound of formula I



where:

m is an integer selected from 0, 1, and 2;

n and o are integers independently selected from 0 and 1;

A is selected from the group consisting of N and CH;

B is selected from the group consisting of -CH₂-CH₂-, -CH₂-CH₂-CH₂-, -CH₂-CH₂-NH-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -C(=O)-NH-, -C(=O)-CH₂-, -CH₂-C(=O)-NH-, -C(=O)-CH₂-C(=O)-, -C(=O)-NH-CH₂-, -C(=O)-, -S(=O)-, -S(=O)₂-, -S(=O)-NH-, -S(=O)₂-NH-, -S(=O)-CH₂-, -S(=O)₂-CH₂-, -S(=O)-CH₂-NH-, -S(=O)₂-CH₂-NH-, -S(=O)₂-NH-CH₂-, -CH₂-S(=O)₂-NH-, -C(=O)-NH-S(=O)₂-, -S(=O)₂-NH-C(=O)-, -C(=O)-CH₂-S(=O)₂-, and -S(=O)₂-CH₂-C(=O)-;

J is absent or selected from the group consisting of -O-, -S-, -CHR¹⁵-O-, -CH₂-CHR¹⁵-O-, -NH-, -NH-CHR¹⁵-, -NH-CHR¹⁵-C(=O)-, -C(=O)-, -CH₂-, -CHR¹⁵-CH₂-NH-, -C(=O)-CHR¹⁵-, -NH-C(=O)-CH(C₁-C₆alkyl)-, -NH-C(=O)-CH(C₃-C₁₂cycloalkyl)-, -CH₂CH₂-, -CH₂NH-, -CH₂NH-C(=O)-, -CH₂-NH-C(=O)-C₁-C₆alkyl-, -CH₂-NH-C(=O)-CH(C₃-C₁₂cycloalkyl)- and -C(=O)-CHR¹⁵-NH-; or

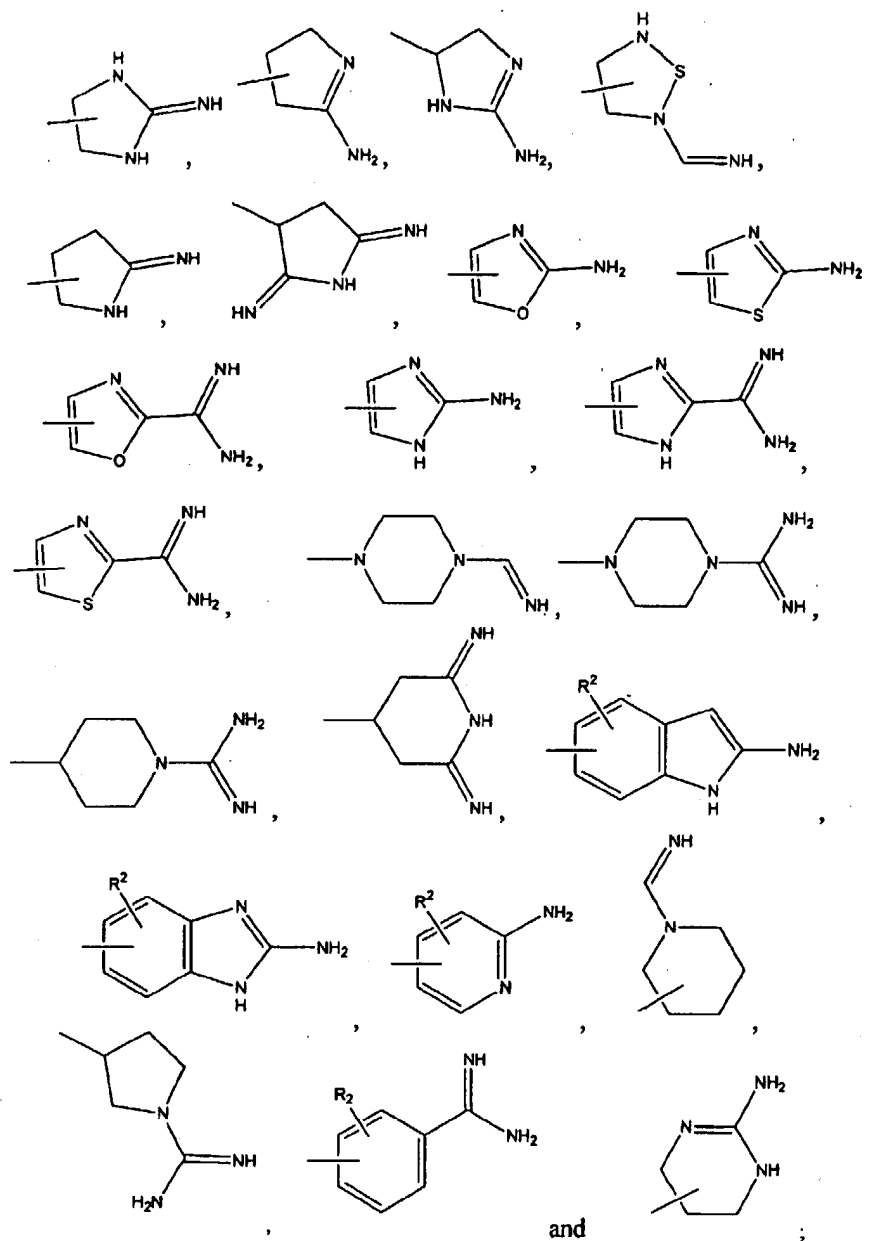
B-J is selected from the group consisting of -C(=O)-CH₂-NH-C(=O)-CH(C₁-C₆alkyl)-, -C(=O)-CH₂-NH-C(=O)-CH(C₃-C₁₂cycloalkyl)-, -C(=O)-NH-(C₂-C₆alkyl)-, -S(=O)₂-NH-(C₂-C₆alkyl)-, -C(=O)-[C(=O)]-NH-, -S(=O)₂-NH-, -C(=O)-CH₂-[CH-] and -S(=O)₂[C(=O)]-CH₂;

L is selected from the group consisting of -O-, -CH₂-O-, -O-CH₂-, -CH₂-CH₂-O-, -O-CH₂-CH₂-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -C(=O)-NH-, -O-C(=O)-NH-, -CH₂-C(=O)-NH-, -C(=O)-CH₂-

Art Unit: 1624

NH-, -C(=O)-NH-CH₂-, -NH-C(=O)-, NH-C(=O)-O-, -NH-CH₂-C(=O)-, -NH-C(=O)-CH₂-, -CH₂-NH-C(=O)-, -NH-C(=O)-NH-, -NH-S(=O)₂-NH-, -NH-S(=O)₂-, -NH-S(=O)₂-CH₂-, -CH₂-NH-S(=O)₂-, -S(=O)₂-NH-, -S(=O)₂-NH-CH₂-, -CH₂-S(=O)₂-NH-, -C(=O)-NH-S(=O)₂-, -S(=O)₂-NH-C(=O)-, -CH₂-NH-, -CH₂-CH₂-NH-, -NH-CH₂-, -NH-CH₂-CH₂-, -CH₂-NH-CH₂-, -C≡C-, -CH₂-C≡C-, -CH₂-CH₂-, -CH₂-CH₂-CH₂-, -CH₂-CH=CH-, CH=CH-CH₂-, and -CH=CH-;

Art Unit: 1624

M is selected from the group consisting of R⁹,

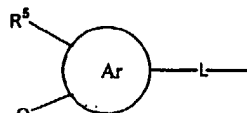
Q is selected from the group consisting of $-\text{C}(=\text{O})\text{OR}^{16}$, $-\text{C}(=\text{O})-\text{NH}-\text{C}(=\text{O})-\text{CF}_3$, $-\text{C}(=\text{O})-\text{NH}-\text{S}(=\text{O})_2-\text{R}^2$, $-\text{C}(=\text{O})-\text{NR}^1-\text{OH}$, 5-oxo-4,5-dihydro[1,2,4]oxadiazol-3-yl, and tetrazolyl;

X is A when n is 1, and is CH, N, O or S when n is 0;

Art Unit: 1624

R^1 is selected from the group consisting of hydrogen, (C_1-C_6) alkyl, halo- (C_1-C_6) alkyl, and (C_3-C_6) cycloalkyl;

R^2 , R^3 and R^5 are individually selected from the group consisting of hydrogen, cyano, nitro, phenyl, phenoxy, benzyl, C_1-C_6 alkyl, halo, halo- C_1-C_6 alkyl, C_3-C_6 cycloalkyl, C_1-C_6 alkoxy, hydroxy, C_1-C_2 alkoxy-methoxy, hydroxy- C_1-C_6 alkyl, formyl, C_1-C_6 alkylcarbonyl, amino, C_1-C_6 alkylamino, aminocarbonyl, C_1-C_6 alkylaminocarbonyl, formylamino, and C_1-C_6 alkylcarbonylamino, where any alkyl or phenyl may optionally be substituted with halo or Q;



R^4 is selected from the group consisting of R^2 and Q where Ar is a homo- or hetero-aryl group having 1 or 2 rings, each ring containing 5, 6 or 7 ring atoms of which 1-3 may be heteroatoms selected from N, O and S;

R^6 is selected from the group consisting of hydrogen, C_1-C_6 alkyl, halo, halo- C_1-C_6 alkyl, C_3-C_6 cycloalkyl, C_1-C_6 alkoxy, C_1-C_6 alkoxy- C_1-C_6 alkyl, hydroxy, hydroxy- C_1-C_6 alkyl, $HC(=O)-C_1-C_6$ alkyl, carboxy, carboxy- C_1-C_6 alkyl, carbonylamino- C_1-C_6 alkyl, aminocarbonyl, $(C_1-C_6$ alkyl)aminocarbonyl, $di(C_1-C_6$ alkyl)aminocarbonyl, and aminocarbonyl- C_1-C_6 alkyl;

R^7 is selected from the group consisting of hydrogen, C_1-C_6 alkyl, halo, halo- C_1-C_6 alkyl, C_3-C_6 cycloalkyl, C_1-C_6 alkoxy, C_1-C_6 alkoxy- C_1-C_6 alkyl, hydroxy, hydroxy- C_1-C_6 alkyl, $HC(=O)-C_1-C_6$ alkyl, carboxy, carboxy- C_1-C_6 alkyl, carbonylamino- C_1-C_6 alkyl, aminocarbonyl, $(C_1-C_6$ alkyl)aminocarbonyl, $di(C_1-C_6$ alkyl)aminocarbonyl, and aminocarbonyl- C_1-C_6 alkyl;

R^7 is hydrogen; or

R^7 and $R^{7'}$ together with the carbon to which they are bonded form $-C(=O)-$;

R^8 is selected from the group consisting of hydrogen, hydroxy, C_1-C_6 alkoxy, C_1-C_6 alkyl, halo, halo- C_1-C_6 alkyl, and C_3-C_6 cycloalkyl;

R^9 is selected from the group consisting of $-NR^{10}R^{11}$, $-C(=NR^{12})-NHR^{13}$, $-N=CR^{14}-NR^{10}R^{11}$, $-NR^{13}-CR^{14}=NR^{12}$, and $-NR^{13}-C(=NR^{12})-NHR^{13}$;

R^{10} , R^{11} , R^{12} , R^{13} and R^{14} are independently selected from the group consisting of hydrogen, hydroxy, hydroxy- C_1-C_6 alkyl, C_1-C_6 alkyl, halo- C_1-C_6 alkyl, C_1-C_6 alkoxy, C_1-C_6 alkoxy- C_1-C_6 alkyl, and C_3-C_7 cycloalkyl; or any member of the group R^{10} , R^{11} , R^{12} , and R^{13} together with the nitrogen

Art Unit: 1624

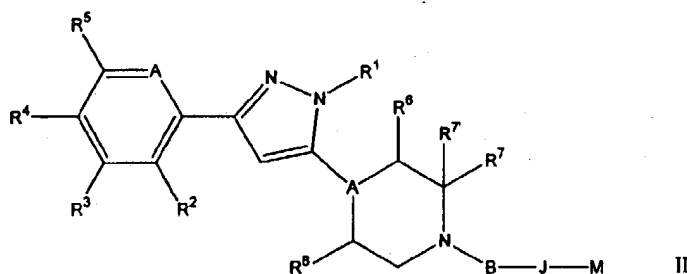
to which it is attached forms a 5, 6 or 7 member heterocycle with any other member of the group, the heterocycle optionally containing one additional heteroatom selected from N, O and S;

R^{15} is selected from the group consisting of hydrogen, C_1 - C_{12} alkyl, C_3 - C_7 cycloalkyl, aminocarbonyl, C_1 - C_6 alkylaminocarbonyl, and di(C_1 - C_6 alkyl)aminocarbonyl; and

R^{16} is selected from the group consisting of hydrogen, C_1 - C_6 alkyl, C_3 - C_{13} cycloalkyl, C_6 - C_{10} aryl, acetylamino- C_1 - C_{12} alkyl, C_1 - C_6 alkylcarbonyloxy- C_1 - C_6 alkyl, and C_6 - C_{10} aryl- C_0 - C_6 alkylcarbonyloxy- C_1 - C_6 alkyl,

or a pharmaceutically acceptable salt thereof.

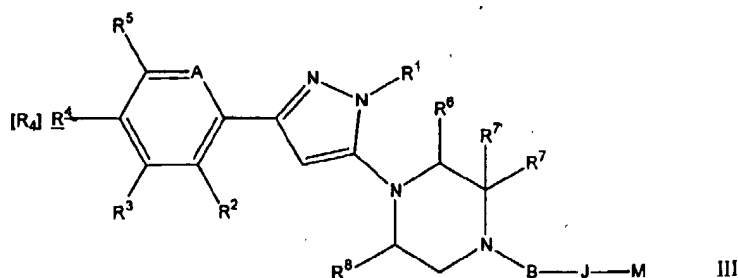
Claim 22 (Previously Presented): The compound of claim 21 that is a compound of formula II



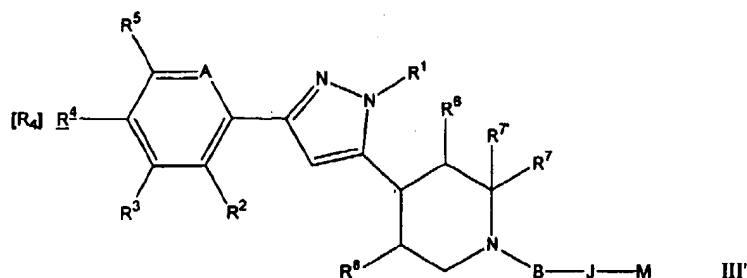
where the substituents are defined as in claim 21;

or a pharmaceutically acceptable salt thereof.

Claim 23 (Currently Amended): The compound of claim 22 that is a compound of formula III or formula III':



Art Unit: 1624



where the substituents are as defined in claim 21,

or a pharmaceutically acceptable salt thereof.

Claim 24 (canceled)

Claim 25 (Currently Amended): The compound of claim 21 where R^1 is hydrogen or (C_1-C_6) C_4-C_6 alkyl.

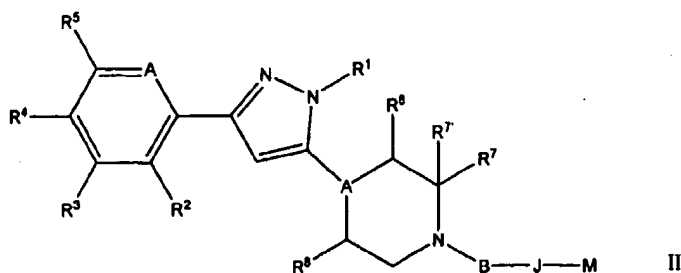
Claim 26 (Previously Presented): The compound of claim 21 where R^2 and R^3 are hydrogen, C_1-C_6 alkyl, cyano, or halo.

Claim 27 (Previously Presented): The compound of claim 21 where B is $-C(=O)-$ or $-S(=O)_2-$.

Claim 28 (Previously Presented): The compound of claim 21 where J is $-CH_2-$, $-CH_2-CH_2-$, $-NH-$, $-NH-CH_2-$, $-CH_2-NH-$, $-CH_2-NH-C(=O)-$, $-CH_2-NH-C(=O)-C_1-C_6$ alkyl- or $-CH_2-NH-C(=O)-CH(C_3-C_{12}$ cycloalkyl)-.

Claim 29 (Previously Presented): The compound of claim 21 where B-J is selected from the group consisting of $-C(=O)-CH_2-NH-C(=O)-CH(C_1-C_6$ alkyl), $-C(=O)-CH_2-NH-C(=O)-CH(C_3-C_{12}$ cycloalkyl)-, $-C(=O)-NH-(C_2-C_6$ alkyl), $-S(=O)_2-NH-(C_2-C_6$ alkyl)-, $-C(=O)-NH-$, $-S(=O)_2-NH-$, $-C(=O)-CH_2-$ and $-S(=O)_2-CH_2-$.

Claim 30 (Previously Presented): A compound of formula II



where:

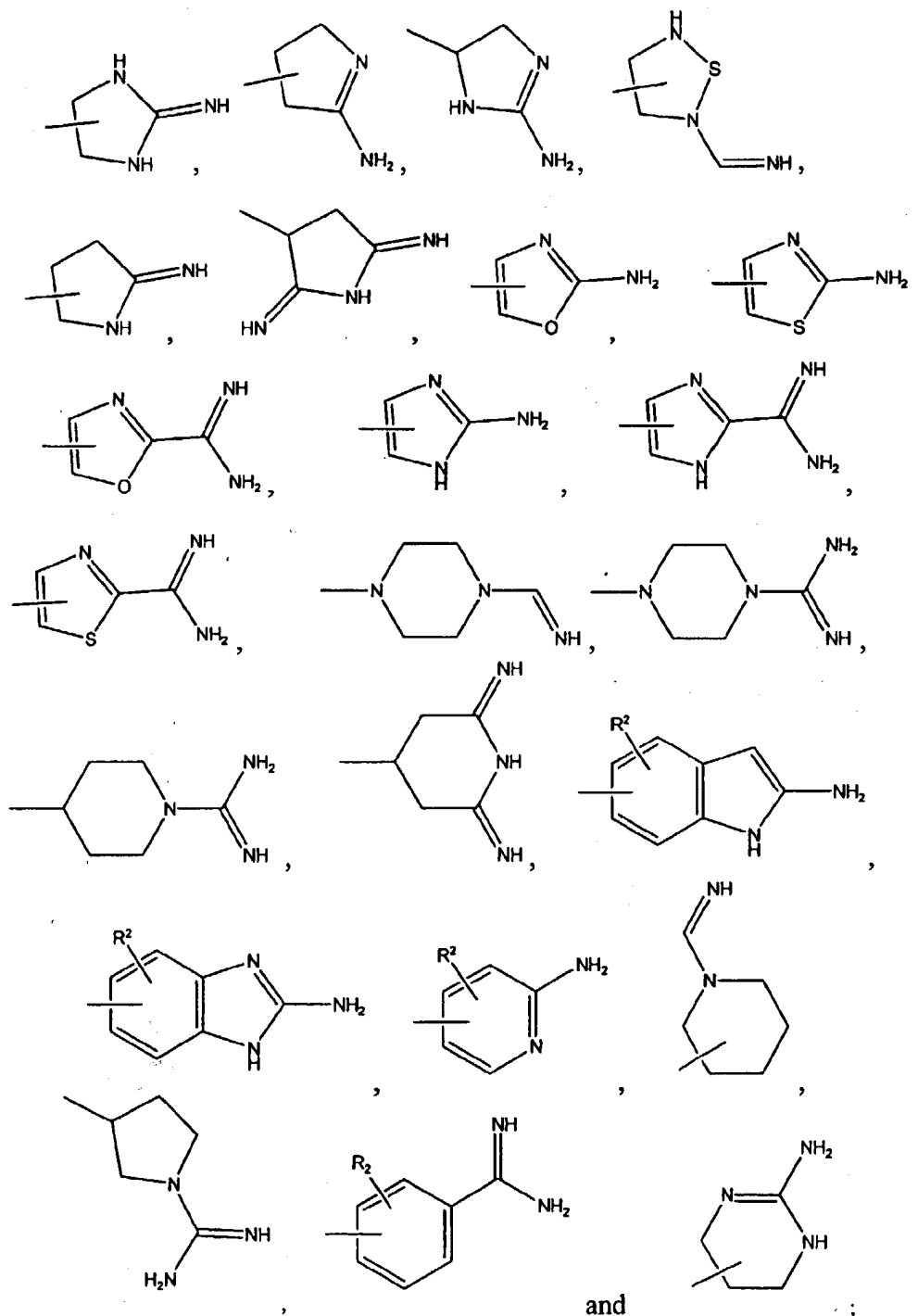
A is selected from the group consisting of N and CH;

B is $-\text{C}(=\text{O})-$ or $-\text{S}(=\text{O})_2-$;

J is $-\text{CH}_2-$, $-\text{CH}_2\text{CH}_2-$, $-\text{NH}-$, $-\text{NHCH}_2-$, $-\text{CH}_2\text{NH}-$, $-\text{CH}_2\text{NH}-\text{C}(=\text{O})-$, $-\text{CH}_2\text{NH}-\text{C}(=\text{O})-\text{C}_1-\text{C}_6\text{alkyl}-$, or $-\text{CH}_2\text{NH}-\text{C}(=\text{O})-\text{CH}(\text{C}_3-\text{C}_{12}\text{cycloalkyl})-$;

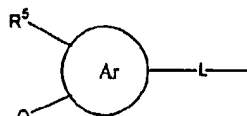
Art Unit: 1624

M is selected from the group consisting of

 R^1 is hydrogen or C_1 - C_6 alkyl;

Art Unit: 1624

R^2 and R^3 are hydrogen, C_1 - C_6 alkyl, cyano, or halo;



R^4 is hydrogen, C_1 - C_6 alkyl, cyano, halo or thienyl, oxazolyl, thiazolyl, or pyrrolyl;

R^5 is hydroxy or C_1 - C_3 alkoxy;

L is selected from the group consisting of $-O-$, $-CH_2-O-$, $-O-CH_2$ and $-CH_2CH_2O-$;

Q is selected from the group consisting of $-C(=O)OR^{16}$, $-C(=O)-NH-C(=O)-CF_3$, $-C(=O)-NH-S(=O)_2-R^2$, $-C(=O)-NR^1-OH$, 5-oxo-4,5-dihydro[1,2,4]oxadiazol-3-yl, and tetrazolyl;

R^6 is selected from the group consisting of hydrogen, C_1 - C_6 alkyl, halo,

halo- C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, C_1 - C_6 alkoxy, C_1 - C_6 alkoxy- C_1 - C_6 alkyl, hydroxy, hydroxy- C_1 - C_6 alkyl, $HC(=O)-C_1$ - C_6 alkyl, carboxy, carboxy- C_1 - C_6 alkyl, carbonylamino- C_1 - C_6 alkyl, aminocarbonyl, $(C_1$ - C_6 alkyl)aminocarbonyl, $di(C_1$ - C_6 alkyl)aminocarbonyl, and aminocarbonyl- C_1 - C_6 alkyl;

R^7 is selected from the group consisting of hydrogen, C_1 - C_6 alkyl, halo, halo- C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, C_1 - C_6 alkoxy, C_1 - C_6 alkoxy- C_1 - C_6 alkyl, hydroxy, hydroxy- C_1 - C_6 alkyl, $HC(=O)-C_1$ - C_6 alkyl, carboxy, carboxy- C_1 - C_6 alkyl, carbonylamino- C_1 - C_6 alkyl, aminocarbonyl, $(C_1$ - C_6 alkyl)aminocarbonyl, $di(C_1$ - C_6 alkyl)aminocarbonyl, and aminocarbonyl- C_1 - C_6 alkyl;

$R^{7'}$ is hydrogen; or

R^7 and $R^{7'}$ together with the carbon to which they are bonded form $-C(=O)-$;

R^8 is selected from the group consisting of hydrogen, hydroxy, C_1 - C_6 alkoxy,

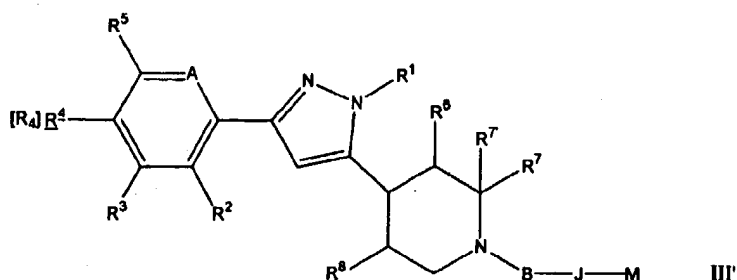
C_1 - C_6 alkyl, halo, halo- C_1 - C_6 alkyl, and C_3 - C_6 cycloalkyl; and

R^{16} is selected from the group consisting of hydrogen, C_1 - C_6 alkyl, C_3 - C_{13} cycloalkyl, C_6 - C_{10} aryl, acetylamino- C_1 - C_{12} alkyl, C_1 - C_6 alkylcarbonyloxy- C_1 - C_6 alkyl, and C_6 - C_{10} aryl- C_0 - C_6 alkylcarbonyloxy- C_1 - C_6 alkyl,

or a pharmaceutically acceptable salt thereof.

Art Unit: 1624

Claim 31 (Currently Amended): The compound claim 30 that is a compound of formula III'



Claim 32 (Previously Presented): A composition comprising a compound of claim 21 or 30 and a pharmaceutically acceptable excipient.

Claim 33 (Previously Presented): A method of treating a mammal having a disease for which the antagonism of IL-2/IL-2R binding is indicated, comprising administering to the mammal a therapeutically effective dose of a compound of claim 21 or 30.

Claim 34 (Previously Presented): The method of claim 33 where the disease is T-lymphocyte-induced rejection of an allograft.

Claim 35 (Previously Presented): The method of claim 34 where T-lymphocytes which express IL-2R in response to antigens of the allograft are contacted with the compound.

Claim 36 (Previously Presented): The method of claim 34 where the allograft is a skin allograft.

Claim 37 (Previously Presented): The method of claim 34 where the allograft is a transplanted organ.

Claim 38 (Previously Presented): The method of claim 37 where the transplanted organ is a heart.

Claim 39 (Previously Presented): The method of claim 33 where the disease is an autoimmune disease.

Claim 40 (Previously Presented): The method of claim 39 where the autoimmune disease is selected from the group consisting of rheumatoid arthritis, multiple sclerosis, uveitis, and psoriasis.